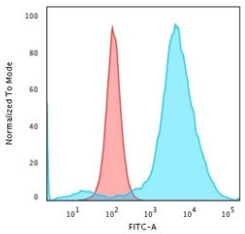
CD55 Antibody 143-30 / DAF Monoclonal Antibody [clone 143-30] (V2475)

Catalog No.	Formulation	Size
V2475-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2475-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2475SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

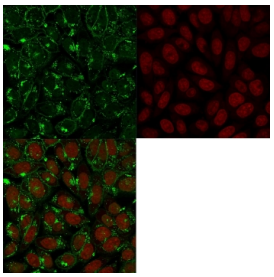
Citations (6)

Bulk quote request

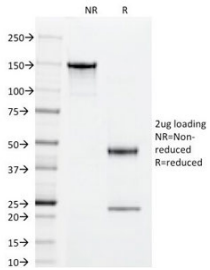
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	143-30
Purity	Protein G affinity chromatography
UniProt	P08174
Localization	Cell surface
Applications	Flow cytometry: 1-2ug/million cells Immunofluorescence: 1-2ug/ml
Limitations	This CD55 Antibody 143-30 / DAF Monoclonal Antibody is available for research use only.



CD55 Antibody 143-30 FACS Staining of Human HeLa Cells. Flow cytometric analysis of PFA-fixed human HeLa cells using DAF Monoclonal Antibody clone 143-30. The CD55-stained population is represented by the blue histogram, while the isotype control is shown in red. A rightward fluorescence shift is observed in the antibody-stained population, demonstrating detection of CD55-associated immunoreactivity.



CD55 Antibody 143-30 IF Staining of Human HeLa Cells. Immunofluorescence analysis of PFA-fixed human HeLa cells using DAF Monoclonal Antibody clone 143-30. Green fluorescence demonstrates CD55-associated staining along cellular boundaries and in additional cellular regions. Reddot nuclear counterstaining is shown in red. Individual fluorescence channels and the merged image are presented.



CD55 Antibody 143-30 SDS-PAGE Analysis of Purified Mouse Monoclonal Antibody. SDS-PAGE analysis of purified, BSA-free DAF Monoclonal Antibody clone 143-30 under non-reducing (NR) and reducing (R) conditions. The non-reduced antibody migrates at approximately 150 kDa, while reducing conditions produce bands corresponding to immunoglobulin heavy and light chains at approximately 50 kDa and 25 kDa, respectively. The analysis demonstrates the electrophoretic integrity of the purified antibody preparation.

Description

CD55 Antibody 143-30 / DAF Monoclonal Antibody targets CD55, a cell surface complement regulatory protein commonly known as decay-accelerating factor (DAF). CD55 protects host cells from complement-mediated injury by accelerating the dissociation of C3 and C5 convertases, enzyme complexes responsible for amplifying complement activation. The protein belongs to the regulators of complement activation family and contains four extracellular complement control protein domains. CD55 is attached to the plasma membrane through a glycosylphosphatidylinositol (GPI) anchor, allowing it to regulate complement activity directly at the cell surface. Its protective function is particularly important in tissues exposed to circulating complement components.

CD55 regulates both the classical and alternative complement pathways. In the classical and lectin pathways, it promotes dissociation of C2a from the C3 convertase C4b2a, while in the alternative pathway it accelerates displacement of Bb from C3bBb. These activities limit the formation and persistence of active convertases, reducing downstream complement amplification and deposition of complement components on host membranes. Unlike CD59, which inhibits formation of the membrane attack complex, CD55 acts earlier in the complement cascade. Together, these membrane-associated regulators help preserve cellular integrity while allowing complement-mediated immune defense to proceed against appropriate targets.

Deficiency of GPI-anchored complement regulators is a defining feature of paroxysmal nocturnal hemoglobinuria (PNH), an acquired hematopoietic stem cell disorder associated with somatic PIGA mutations. Affected blood cells lack CD55 and CD59, increasing their susceptibility to complement-mediated destruction. CD55 also carries antigens of the Cromer blood group system, and inherited CD55 deficiency can cause CHAPLE disease, characterized by complement hyperactivation, angiopathic thrombosis, and protein-losing enteropathy. These disorders demonstrate the importance of tightly controlled complement activity in maintaining vascular and tissue homeostasis.

CD55 expression has also been investigated in cancer, infection, transplantation, and inflammatory disease. Increased surface expression can help certain tumor cells resist complement-dependent immune injury, although its contribution to tumor progression varies with biological context. CD55 additionally interacts with CD97, also known as ADGRE5, and participates in cellular interactions beyond complement regulation. Its established role in immune protection makes DAF Antibody research relevant to studies of complement signaling, membrane protein expression, and disease-associated changes in immune regulation. CD55 Antibody 143-30 supports investigation of these processes and the mechanisms governing complement activity at cellular surfaces.

For additional antibodies targeting cell surface markers involved in immune regulation and cellular interactions, explore our CD Antibodies collection.

Application Notes

Optimal dilution of the CD55 Antibody 143-30 / DAF Monoclonal Antibody should be determined by the researcher.

Immunogen

PHA stimulated human PBL were used as the immunogen for the CD55 antibody.

Storage

Store the CD55 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Decay accelerating factor antibody, DAF antibody, complement decay-accelerating factor antibody, complement regulatory protein CD55 antibody, complement decay-accelerating protein antibody, CD55 antigen antibody, CD55 glycoprotein antibody, GPI-anchored CD55 antibody, membrane-bound decay accelerating factor antibody, complement regulator CD55 antibody, complement control protein CD55 antibody, Cromer blood group antigen antibody

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